

**Question 1 Subcommittee
Status Report
For Presentation July 26-27, 2006**

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1.0 Introduction

On December 1, 2005 this subcommittee was formed under the DOI FACA Committee and assigned to address FACA Question 1:

What are the best available procedures for quantifying natural resource injury on a population, habitat or ecosystem level ? What guidance is appropriate for the utilization of these procedures ?

On the basis of discussion with and agreement from the full FACA on March 1, 2006, the above FACA Question 1 was revised to:

What are the practical steps to determine injury and damage to habitat at the various levels of biological scale (i.e., individual to ecosystem)?

Following the formation of our Subcommittee, we have discussed our assigned question at length during numerous conference calls and once in person. Parts of several conference calls were devoted to verbal interviews of practitioners in the field. Despite our best efforts to clearly outline all sides of the issues and

try to reach a consensus response to our question it has become clear that further discussion among the Subcommittee will be needed to complete our tasks (see Table 1).

At present, six of seven subcommittee members agree that the following three recommendations would improve the existing regulations and should be presented to the DOI for its consideration:

1. Increase flexibility in 43 CFR 11 regulations.
2. Clarify that injury determination and quantification can be accomplished at various levels of biological scale, including individual, population, community, or ecosystem or on a habitat basis.
3. Develop guidance documents that can be updated on a regular basis to address scientific advancements.

2.0 Discussion

Issue #1 FACA Question 1

During recent Subcommittee discussions, concerns have been raised regarding the rewording of the question. The Subcommittee needs to determine whether the question posed to us should have been reworded and, if so, what the final revision should be.

Issue #2 Summary of Relevant Regulatory Requirements

A review of 43 CFR 11 indicates that the regulations are confusing with respect to the terms population, habitat, and ecosystem, leaving practitioners with

uncertainties regarding their meaning, and which biological scale may be preferable for determining natural resource injury. In addition, the regulations appear to utilize different biological scales for injury determination and quantification. For example:

- **Injury Determination for Biological Resources:**

The regulations for injury determination appear to rely primarily on effects at the level of individuals, although “populations” are discussed as part of a requirement to determine statistically significant differences between samples from populations in assessment and control areas. For example,

- 11.62 (f) states “*An injury to a biological resource has resulted ... if concentration of the substance is sufficient to: (i) Cause the biological resource or its off-spring to have undergone at least one of the following adverse changes in viability: death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction), or physical deformations; or...*”
- 11.62 (3) does use the term population and states that “*... the injury determination must be based upon the establishment of a statistically significant difference in the biological response between samples from populations in the assessment area and in the control area.*”

- **Injury Quantification for Biological Resources:**

By contrast, the regulations appear to utilize populations, habitats, and ecosystems as the levels where injury quantification should occur:

- 11.71 (1) states *“The extent to which the injured biological resource differs from baseline should be determined by analysis of the population or the habitat or ecosystem levels.”*
- 11.71 (4) states *“Population, habitat, or ecosystem measurement methods that provide data that can be interpreted in terms of services must be selected. To meet this requirement, a method should:*
 - *(i) Provide numerical data that will allow a comparison between the assessment area data and the control area or baseline data.”*

The Subcommittee notes again that the regulations do not provide working definitions of certain terms, and offer little guidance for selecting appropriate methods (beyond citing some standard census techniques and reference manuals for measuring population differences).

Issue #3 Preliminary Evaluation of Question

The subcommittee’s deliberations have explored and tried to identify when assessments at each of the levels prescribed by the regulations may or may not be appropriate. Based on the experience of several subcommittee members and many of the damage assessment practitioners the subcommittee spoke with, it is clear that NRDA cases vary widely in complexity. This variety, in part, has stimulated much of the discussion and debate among the Subcommittee as to the recommended methodologies for injury quantification. Some NRDA cases are relatively straight forward incidents involving the short-term release of one or

only a few potentially hazardous substances in a limited geographical space, whereas other cases are very complex involving the long-term release of multiple potentially hazardous substances over a wide area. In these latter situations, it usually is problematic to precisely separate the confounding impact of other chemical, physical, and biological stressors that may have been present in the same area for many years.

The current DOI regulations (43 CFR 11) seem to be designed primarily to address the more complex NRDA cases and the regulations contain a variety of very specific procedures and processes for assessing injury and measuring damages. Our subcommittee determined, however, that even for large, complex NRDA cases the DOI NRDA regulations are rarely followed because the regulations are too complex, confusing, and/or prescriptive. We also determined that some practitioners believe the procedures and processes mandated in the regulations to assess injury and determine damages are outdated or not particularly useful in helping to resolve controversial issues. In addition, the mandated step-wise process of documenting:

Release → exposure → injury → damages → restoration often is not the most cost effective and efficient process, nor does it necessarily lead to the appropriate resolution of a claim and timely restoration actions.

Based on our experience and interviews, we concluded that the regulations appeared to be designed from the perspective that litigation, and the collection of

litigation-quality information, would be the more common approach for resolving NRD cases. However, practitioner experience indicates that non-litigated settlements are more common, and the regulations could be improved if greater flexibility were incorporated to allow the procedural steps in the damage assessment to fit the scale of the incident while maintaining sound scientific approaches. There have been, and will continue to be, those cases where formal, step-wise regulations will be necessary to codify the legal defenses and protections of both the RP and Trustee communities. Often what is beneficial and necessary from a legal perspective runs counter to what is beneficial and necessary from a technical perspective. This point continues to be an area of discussion among the Subcommittee members.

Issue #4 Preliminary Conclusion

- For the above reasons, the subcommittee recommends that DOI either amend the existing 43 CFR 11 regulations to increase flexibility in the NRDA claims process, or develop new, technically-sound guidance.
- It is important for DOI to clarify that from a technical perspective, injury determination and quantification can be accomplished at various levels of biological scale, including individual, population, community, or ecosystem or on a habitat basis. Furthermore, certain site-specific factors should be considered in selecting the appropriate scale for injury assessment. Such clarifications by DOI should provide a framework for practitioners from the RP and Trustee communities to assess injury in a timely and cost-effective

manner. Increased flexibility in the NRDA process would promote quicker resolution of the more numerous, less complex, and smaller cases, thus resulting in a decrease in process time and associated costs. More flexibility in the process may also foster, when warranted, earlier discussion of potential restoration actions.

We believe that increased flexibility in the regulations, or through the development of new guidance, can be accomplished while still preserving much of the existing procedures for use at the more complex sites where legal defenses and protections may be needed. Finally, because many NRDA cases involve the application of complex and constantly evolving scientific information, we propose that DOI consider writing and regularly updating (two to three year interval) state-of-the-science technical guidance documents for conducting injury assessments and determining damages.

3.0 Suggestions for Next Steps

- a. There will be substantive discussion required for the Subcommittee to complete its tasks. The areas in need of further discussion are shown in Table 1.
- b. Clarify Committee intent on full vetting and presentation of relevant issues vs. reaching consensus in Subcommittee reports.
- c. Obtain Committee guidance on whether or not the term “damages” can be removed from the revised Subcommittee 1 question. If the term remains

in the charge question, we encourage the full Committee to reflect on how it may impact our Subcommittee's ability to complete our tasks.

- d. Obtain resolution from full Committee on the format and content for our Subcommittee report. We need to understand the length of the report and the depth of detail required.
- e. Clarify the Committee timeline and meeting schedules for producing a report.

Table 1. Status of Deliberations Among Subcommittee 1.

Issue Area	Points
Agreement	<ul style="list-style-type: none"> • Several terms need defining including population, ecosystem, habitat.... Perhaps community and other terms our Subcommittee may have introduced (e.g. practical, flexible). • The existing DOI regulations are not widely followed in most (that we know of) NRDA cases. • NRDA cases vary between relatively simple, straightforward short-term releases of just one or two potentially hazardous substances, to highly complex, long-term releases of numerous potentially hazardous substances into geographically large areas with other confounding variables (e.g. historical releases from municipal outfalls, CSOs, mining sites, and etc.). • The large and complex NRDA cases are relatively small in number, but tend to generate the most debate and concern among RPs and Trustees. • The numerous prescriptive procedures in the 43 CFR 11 regulations and the mandated step-wise process of moving from releases to restoration sometimes hinders the timely resolution of claims. • “Damages”, which was inserted into our question during the full committee meeting in March 2006, probably should be removed.
Need Further Discussion	<ul style="list-style-type: none"> • Whether the question posed to us should have been reworded and, if so, what the revision should be. • Whether there is sufficient “flexibility” in the existing 43 CFR 11 regulations to conduct injury assessments in a timely, cost-effective manner. • Definitions of many of the terms in the existing regulations such as: population, ecosystem, etc. • Definitions of other terms that the Subcommittee has used in the revised question or in our analysis of the question, such as: “practicality”, “flexibility”, and “prescriptive”. • What are the appropriate biological scales that injury assessment could or should be documented? • When consideration of potential restoration options should be included in the injury assessment process.
Uncertainties	<ul style="list-style-type: none"> • Document does not address injury to T&E species, which Trustee representatives (at least) believe warrant assessment at the individual level. • Should DOI produce separate injury assessment guidelines in addition to, or in lieu of, some or part of the existing 43 CFR 11 regulations ?